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IMMUNOCYTOCHEMICAL STUDIES OF 'SCHISTOSOMA MANSONI'.(U)
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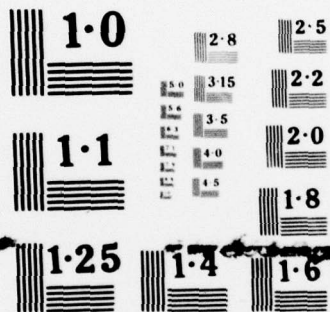
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IMMUNOCYTOCHEMICAL STUDIES ON SCHISTOSOMA MANSONI

FINAL SCIENTIFIC REPORT
1973-1976

BURTON J. BOGITSH

APRIL 7, 1977

SUPPORTED BY

US ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) *The localization of soluble, cercarial antigen preparation (CAP) and soluble egg antigen (SEA) were localized in cercariae and miracidia, respectively at the light and electron microscope levels using the unlabeled antibody method. In the cercaria, CAP was observed associated with the contents of the pre- and postacetabular glands and with the filamentous coat of mature cercariae. CAP components were also observed in the area surrounding the intrasporocyst cercariae. In the eggshell enclosed miracidia, SEA was observed in the contents of the		

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Apical and lateral penetration glands, in the epithelium, and in secretory products of possibly an escape gland in the organism. SEA components were also observed in the contents of the egg, between the miracidium and the external egg-shell.

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The major objectives of the research were to localize soluble egg antigens (SEA) in eggshell-enclosed miracidium of Schistosoma mansoni and to evaluate several immunocytochemical techniques that will localize these antigens at the light and microscope levels of resolution. Of the procedures evaluated, the unlabeled antibody procedure proved to be the most sensitive and reproducible.

The localization of soluble egg antigen (SEA) in the eggshell-enclosed miracidium of Schistosoma mansoni was performed at the light and electron microscope levels using the unlabeled antibody method. Reaction product was observed associated with the contents of the 3 major gland cells described previously. Additionally, small vesicles were observed that reacted positively for SEA. It was hypothesized that they may be responsible for the secretion of the hatching fluid. SEA components were also observed in the epidermis of the miracidium and in the area subjacent to the eggshell.

The localization of the soluble, carcarial antigen preparation (CAP) in cercariae and schistosomules of Schistosoma mansoni was performed at the light and electron microscope levels using the unlabeled antibody method. Reaction product was observed associated with the contents of the pre- and postacetabular glands and with the filamentous coat of mature cercariae. No reaction product was observed associated with the glycocalyx of schistosomules. However, several schistosomules did retain remnants of their filamentous coats and reaction product was observed associated with those remains. CAP components were also observed in the area surrounding the intrasporocyst cercariae.

PUBLICATIONS:

Bogitsh, B.J. and C.E. Carter, 1975. Immunocytochemical studies of Schistosoma mansoni. I. Soluble egg antigen in eggshell-enclosed miracidium. J. Parasit. 61: 1031-1040.

Bogitsh, B.J. and S.P. 1976. Immunocytochemical studies on Schistosoma mansoni. II. Soluble cercarial antigens in cercariae and schistosomule. J. Parasit. 62: 709-714.

These two reports were also presented at the annual meetings of the Southeastern Society of Parasitologists.

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